

ABSTRACT

A database system providing SQL extensions for automated encryption and decryption of column data is described. In one embodiment, for example, in a database system, a method is described for providing automated encryption support for column data, the method comprises steps of: defining Structured Query Language (SQL) extensions for creating and managing column encryption keys, and for creating and managing database tables with encrypted column data; receiving an SQL statement specifying creation of a particular column encryption key; receiving an SQL statement specifying creation of a database table having particular column data encrypted with the particular column encryption key; and in response to a subsequent database operation that requires the particular column data that has been encrypted, automatically decrypting the particular column data for use by the database operation.